

**WHAT IS CLAIMED IS:**

1. An image compensating method, comprising:

using a plurality of scanning lines to scan a document and a longitudinal black and white pattern, in order to produce a plurality of actual gray level values for a plurality of pixels with respect to each of the scanning lines and the document, as well as a correctional gray level value for complete black and a correctional gray level value for complete white with respect to the longitudinal black and white pattern; and

obtaining a compensational gray level value with respect to the actual gray level value for each of the pixels according to the correctional gray level value for complete black, the correctional gray level value for complete white, a theoretical gray level value for complete black, a theoretical gray level value for complete white, and the actual gray level value for each of the pixels.

2. The image compensating method as recited in claim 1, wherein the method is used in a scanner and the scanner comprises:

a top;

a chassis, which is movable under the top; and

a scanning platform that is located on the top and used to be aligned with the document,

wherein the longitudinal black and white pattern is located on an inner wall of the top on a side near the scanning platform, so as to allow the scanner to perform image brightness compensation on an image when the chassis of the scanner scans the document.

5           3. The image compensating method as recited in claim 1, wherein the method further comprises:

calculating [(each of the actual gray level values with respect to each of the pixels – the correctional gray level value for complete black) / (the correctional gray level value for complete white – the correctional gray level value for complete black) × (the theoretical gray level value for complete white – the theoretical gray level value for complete black)], so as to obtain the compensational gray level value for each of the pixel.

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4. An image compensating method, comprising:

using a plurality of scanning lines to scan a document and a longitudinal complete white pattern, in order to produce a plurality of actual gray level values for a plurality of pixels with respect to each of the scanning lines and the document, as well as a correctional gray level value for complete white with respect to the longitudinal white pattern; and

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obtaining a compensational gray level value with respect to the actual gray level value for each of the pixels according to the correctional gray level

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value for complete white, a theoretical gray level value for complete white, and the actual gray level value for each of the pixels.

5. The image compensating method as recited in claim 4, wherein the method is used in a scanner and the scanner comprises:

5 a top;

a chassis, which is movable under the top; and

a scanning platform that is located on the top and used to be aligned with the document,

wherein the longitudinal complete white pattern is located on an inner wall of the top on a side near the scanning platform, so as to allow the scanner to perform image brightness compensation on an image when the chassis of the scanner scans the document.

6. The image compensating method as recited in claim 5, wherein the method further comprises:

15 calculating [each of the actual gray level values with respect to each of the pixels  $\times$  (the theoretical gray level value for complete white / the correctional gray level value for complete white)], so as to obtain the compensational gray level value for each of the pixel.

7. An image compensating method, comprising:

using a plurality of scanning lines to scan a document and a longitudinal complete black pattern, in order to produce a plurality of actual gray level values for a plurality of pixels with respect to each of the scanning lines and the document, as well as a correctional gray level value for complete black with respect to the longitudinal black pattern; and

obtaining a compensational gray level value with respect to the actual gray level value for each of the pixels according to the correctional gray level values for complete black, a theoretical gray level value for complete black, and the actual gray level value for each of the pixels.

8. The image compensating method as recited in claim 7, wherein the method is used in a scanner, and the scanner comprises:

a top;

a chassis, which is movable under the top; and

a scanning platform that is located on the top and be aligned with the document,

wherein the longitudinal complete black pattern is located on an inner wall of the top on a side near the scanning platform, so as to allow the scanner to perform image brightness compensation on an image when the chassis of the scanner scans the document.

9. The image compensating method as recited in claim 7, wherein the method further comprises:

calculating [each of the actual gray level values with respect to each of the pixels – (the correctional gray level value for complete black – the  
5 theoretical gray level value for complete black)], so as to obtain the compensational gray level value for each of the pixel.